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11 BEFORE THE STATE OF WASHINGTON  
12 ENERGY FACILITY SITE EVALUATION COUNCIL  
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15 In the Matter of Application No. 99-1:  
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18 SUMAS ENERGY 2 GENERATION  
19 FACILITY  
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EXHIBIT \_\_\_\_ (RK-RT)

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24 APPLICANT'S PRE-FILED REBUTTAL TESTIMONY  
25

26 WITNESS: RICHARD KEEFE  
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30 Q. Please re-introduce yourself to the Council.  
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32 A. My name is Richard Keefe. I'm an investment banker with Macquarie Corporate  
33 Finance in New York. I assist clients with the sale, purchase and financing of energy  
34 facilities.  
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40 Q. What issues will your rebuttal testimony address?  
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42 A. I will address the financial implications of the greenhouse gas offset proposals being  
43 advocated by some parties in these proceedings. In particular, I have reviewed the  
44 testimony submitted by Richard Gammon on behalf of the "Counsel for the  
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1 Environment" and the testimony submitted by Nancy Hirsh, K.C. Golden and Peter  
2 West on behalf of the Northwest Energy Coalition, and will respond to portions of  
3 that testimony.  
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9 **Q. Based on your review of the testimony, what do you understand the witnesses for**  
10 **the Council for the Environment and the Northwest Energy Coalition to be**  
11 **recommending?**  
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14 A. As I understand from their testimony, these witnesses believe that the Siting Council  
15 should require the developers of the SE2 project to provide up-front funding to "fully  
16 offset" the greenhouse gas emissions that would be associated with operating that  
17 facility at 100% capacity for a 30-year period. Mr. West calculates the annual  
18 emissions (assuming 100% capacity) to be 2.42 million tons. The witnesses then vary  
19 in their assessment of the price of offsets. Mr. West says \$1.88 per ton, Ms. Hirsh  
20 says \$2 per ton, and Mr. Golden says \$5 per ton. Mr. West also contends that the  
21 developer should pay an additional 5-10% to cover administrative costs.  
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32 **Q. How much would it cost to provide the so-called "full offset" that they have**  
33 **recommended?**  
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36 A. Using their assumptions, just doing the math, it would cost between about 135 million  
37 dollars and 363 million dollars, plus the 5-10% administrative costs, which brings the  
38 total in the range of 140-400 million dollars.  
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45 **Q. In your professional opinion, would anyone build this project if that sort of**  
46 **mitigation requirement were attached?**  
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1 A. An increase of \$140-400 million in cost without a commensurate revenue increase  
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3 would be a huge disadvantage that, in my opinion, would make it extremely unlikely  
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5 that the project could be financed. Such an increase would represent an  
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7 approximately 30-80% increase in project cost. This would be a huge disadvantage in  
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9 an increasingly competitive market.

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12 Another way to examine the impact on investment decision that such a cost increase  
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14 could have would be to calculate the necessary increase in revenue that would be  
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16 needed to maintain the Internal Rate of Return (IRR) of the project investors – the  
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18 return on capital that the investors receive after payment of all expenses, etc. This  
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20 would require making some assumptions. For example:  
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22 Capacity	660 MW
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24 Capacity Factor	82.5%
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26 Debt/Equity Ratio	50/50
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28 Debt Term	20 yrs
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30 Debt Rate	9%
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32 Equity IRR	17%
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34 Equity Horizon	30 yrs
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36 Offset Cost	\$140 million - \$400 million
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40 On these assumptions, it would require an approximately \$25-71 million per year  
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42 increase in revenue to maintain investor IRR. This would translate into an  
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44 approximately 0.53 to 1.51 cent increase in revenue per kilowatt sold. At first  
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46 impression, this might seem like an insignificant amount, but when compared to the  
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1 current spot price of electricity of 2.5 cents, this would represent a greater than 20%  
2 increase at the lower end of the range, and almost 60% at the upper end, in cost to be  
3 passed on to consumers. Again, this would probably be seen as a prohibitively high  
4 hurdle for successful financing.  
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10 **Q. In his testimony, Mr. West argues that a \$118 million offset requirement would**  
11 **translate into a what he describes as a "relatively small price impact" per**  
12 **kilowatt hour. How do you respond to his analysis?**  
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15 **A.** Even if Mr. West were correct as to his characterization of the magnitude of the  
16 economic impact of the required offset (which he is not), his basic premise is flawed.  
17 To say that this offset would have a "relatively small price impact per kilowatt hour"  
18 misstates how prices will be set in the marketplace. The offset cost will not  
19 necessarily have any impact on the price at which the project's electricity is sold, no  
20 matter what the magnitude. Energy is sold into a competitive market; it is not a cost-  
21 pass-through product. This asset will not be guaranteed a regulated rate of return on  
22 its construction cost. The Sumas 2 generating facility will sell its product--electricity-  
23 -in competition with all other energy producers only at what the competitive market  
24 will pay. The project cannot just add costs (mandated or otherwise) to its product and  
25 expect its revenue to rise proportionately by passing on such expenses to consumers.  
26 Additional costs, from whatever source, will be borne by the equity investors in the  
27 project. Extra costs raise the investment threshold.  
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43 **END OF TESTIMONY**  
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